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EXAMINER	
DUONG, FRANK	

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Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 09/271,011	Applicant(s) KALKUNTE ET AL.	
	Examiner Frank Duong	Art Unit 2666	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *05 May 2003* .

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-20* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-20* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

11)☐ The proposed drawing correction filed on _____ is: a)☐ approved b)☐ disapproved by the Examiner.

If approved, corrected drawings are required in reply to this Office action.

12)☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

13)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____ .

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

14)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).

a) ☐ The translation of the foreign language provisional application has been received.

15)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ .
4) ☐ Interview Summary (PTO-413) Paper No(s). _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: .

DETAILED ACTION

1. This Office Action is a response to the communication dated 05/05/2003. Claims 1-20 are pending in the application.

Double Patenting

The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. See *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970);and, *In re Thorington,* 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent is shown to be commonly owned with this application. See 37 CFR 1.130(b).

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

2. Claims 1-20 are provisionally rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1-20 of copending Application No. 09/271,008. Although the conflicting claims are not identical, they are not patentably distinct from each other because the claimed subject matter of claims 1-20 of the instant application encompasses the claimed invention of claims 1-10 of the above copending patent application for the same rationales stated in the Office Action dated 07/30/2002.

The subject matter claimed in the instant application is fully disclosed in the referenced copending application and would be covered by any patent granted on that

copending application since the referenced copending application and the instant application are claiming common subject matter. Furthermore, there is no apparent reason why applicant would be prevented from presenting claims corresponding to those of the instant application in the other copending application.

This is a provisional obviousness-type double patenting rejection because the conflicting claims have not in fact been patented.

3. Claims 1-20 are provisionally rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1-22 of copending Application No. 09/131,141. Although the conflicting claims are not identical, they are not patentably distinct from each other because the claimed subject matter of claims 1-20 of the instant application is common and encompasses the claimed invention of claims 1-22 of the above copending patent application for the same rationales stated in the Office Action dated 07/30/2002.

The subject matter claimed in the instant application is fully disclosed in the referenced copending application and would be covered by any patent granted on that copending application since the referenced copending application and the instant application are claiming common subject matter. Furthermore, there is no apparent reason why applicant would be prevented from presenting claims corresponding to those of the instant application in the other copending application.

This is a provisional obviousness-type double patenting rejection because the conflicting claims have not in fact been patented.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

4. Claims 1-20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Simmons in view of Frazier.

Regarding **claim 1**, in according to '028, Figures 2-4, col. 6, line 5 to col. 10, line 12, Simmons discloses a flow control method (corresponding to "method for preserving frame order of a plurality of frames" in a half duplex Ethernet network (*Figure 2*) (corresponding to "plurality of communication links"), the method comprising, among other things: assigning a plurality of pointer values to a corresponding plurality of records in a pointer value buffer (104) associated with each of the virtual links (*MACs 60, 62 and 36*), the assignment of the plurality of pointer values (*frame pointers*) based, at least in part, on a relative order in which data frames are transmitted on each of the virtual links (*note: col. 8, lines 21-43, Simmons discloses rules checker 42 or 68 places the port vector and the corresponding frame pointer into the port vector FIFO 63. Then, the port vector FIFO 63 assigns the frame pointer to the appropriate destination port(s) by placing the frame pointer into the top of the appropriate output queue 67 (corresponding to claimed "based on a relative order in which the data frames are transmitted on each of the virtual links" because the frame pointer is placed into the top of the output queue 67)* and each of the plurality of pointer values (frame pointers) being

used to determine an order in which the data frames corresponding to the plurality of pointer values are promoted from a receive buffer for transmission (*see col. 8, lines 1-20. It is note frame pointer is assigned to frames received on MAC engine 60, 62 or 36 in the example disclosed thereat. However, a plurality of frame pointers is anticipated by frame pointers assigned to data frames received on MAC engines 60, 62 and 36, inherently. Also* note that Simmons, in according to col. 6, lines 50-56, also discloses one of the advantages of using external rule checker 44 is increasing the capacity of the network. Moreover, Simmons, in according to Figure 2A, also shows signal RX_DVB, as known in the Gigabit Ethernet world is Received Data Valid signal, when enable causes MII 28 in the interface 12 to receive data on RXDB)..

Simmons fails to explicitly disclose the step of receiving up to a plurality of indications denoting commencement of frame transmission on each of the virtual links. However, the step of receiving up to a plurality of indications denoting the start of frame transmission on each of the virtual links is well known in the Ethernet community and discloses by Frazier.

In according to '559, Figures 1, 3C-3D and 6, the abstract and col. 6, lines 6-9, col. 9, line 31 to col. 10, line 24, and col. 13, lines 39-42, Frazier discloses a flow control method in a full duplex Ethernet network comprising, among other steps, the step of receiving up to a plurality of indications denoting the start of frame transmission on each of the virtual links (*note: '559, col. 6, lines 6-9, Frazier discloses when RX_DV is asserted on the MII, MAC receive processing logic accepts and process data from the physical layer, and then passes the processed data to the logical link control layer and*

col. 13, lines 39-42, Frazier discloses the receive carrier sense variable may be derived directly form the MII signal RX_DV, and is used to indicate incoming bits. Thus, the recitation thereat is corresponding to the claimed step of receiving.)

It would have been obvious to a skilled artisan at the time of the invention to implement Frazier's teaching into Simmons' method to arrive the claimed invention with a motivation of providing a flow control mechanism for a full-duplex Ethernet network as well as increasing the network capacity.

Regarding **claim 2**, in addition to features called for in base claim 1 (*see rationales pertaining the rejection of base claim 1 discussed above*), Simmons in view of Frazier discloses wherein prior to assigning the plurality of pointer values, the method further comprising receiving the data frames transmitted on each of the plurality of virtual links in a common receive buffer (*see '028, element 34 and the description at col. 6, lines 15-20 and col. 10, lines 13-22*). Thus, Simmons in view of Frazier discloses the claimed invention.

Regarding **claim 3**, in addition to features called for in base claim 2 (*see rationales pertaining the rejection of base claim 2 discussed above*), Simmons in view of Frazier discloses reading the received data frames from the common receive buffer (34) based, at least in part, on the pointer value assigned in each of the pointer value buffers ('see '028, col. 8, lines 34-43). Thus, Simmons in view of Frazier discloses the claimed invention.

Regarding **claim 4**, in addition to features called for in base claim 3 (*see rationales pertaining the rejection of base claim 3 discussed above*), Simmons in view of

Frazier discloses wherein frames are promoted from the received buffer to a system state with priority given to pointer value order in higher transmission rate pointer value buffers (see '028, col. 8, lines 21-43 wherein Simmons discloses the port vector FIFO 63 assigns the frame pointer to the destination port by placing the frame pointer into the top of the appropriate output queue 67, queuing the transmission of the data frame. Thus, Simmons discloses frames are promoted from the received buffer (34) with priority given to pointer value order. At col. 10, lines 33-40, Simmons further discloses the base address for the entire memory 34 is programmable. In according to Fig. 1, Simmons shows the integrated multiport switch 12 serves 24 10Mb/s networks stations 14 and 2 100Mb/s networks stations 16. Thus, It is obvious to those skilled in the art to associated priority given to pointer value order in higher transmission rate pointer value buffers to better server the network station users with the higher transmission rate by programming the base addresses in the memory 34). Thus, Simmons in view of Frazier discloses the claimed invention.

Regarding **claim 5**, in addition to features called for in base claim 1 (*see rationales pertaining the rejection of base claim 1 discussed above*), Simmons in view of Frazier discloses wherein a plurality of pointer value buffers are used to store pointer values denoting the commencement of transmission of frames on a corresponding plurality of virtual links supporting a particular transmission speed (see '028, Fig. 7B, col. 13, line 29 to col. 14, line 28). Thus, Simmons in view of Frazier discloses the claimed invention.

Regarding **claim 6**, in addition to features called for in base claim 1 (*see rationales pertaining the rejection of base claim 1 discussed above*), Simmons in view of Frazier discloses wherein frames are promoted in pointer value order with priority given pointer values stored in the pointer value buffers associated with higher transmission rate virtual links (see '028, col. 8, lines 21-43 wherein Simmons discloses the port vector FIFO 63 assigns the frame pointer to the destination port by placing the frame pointer into the top of the appropriate output queue 67, queuing the transmission of the data frame. Thus, Simmons discloses frames are promoted in pointer value order with priority given pointer values stored in the pointer value buffers. At col. 10, lines 33-40, Simmons further discloses the base address for the entire memory 34 is programmable. In according to Fig. 1, Simmons shows the integrated multiport switch 12 serves 24 10Mb/s networks stations 14 and 2 100Mb/s networks stations 16. Thus, It is obvious to those skilled in the art to associated priority given to pointer value order in higher transmission rate pointer value buffers to better server the network station users with the higher transmission rate by programming the base addresses in the memory 34). Thus, Simmons in view of Frazier discloses the claimed invention.

Regarding **claim 7**, it is well known in the Ethernet community that signals to include the indication (RX_DV) between the PHY and MAC are analog. Thus, RX_DV, the indication, is an analog indication.

Regarding **claim 8**, see '028, Fig. 2A, RX_DVB or '559, Fig. 5, RX_DV.

Regarding **claim 9**, see '028, Figs. 4-5.

Regarding **claims 10-20**, the claims are rejected by the same rationales applied to claims 1-9 because of claiming an apparatus and computer program that mirror the claimed method of claims 1-9.

Response to Arguments

5. Applicant's arguments filed 05/05/2003 have been fully considered but they are not persuasive. Applicants' arguments will be addressed hereinbelow in the order in which they appear in the response filed 05/05/2003.

In the Remarks of the outstanding response, on page 7 continues to page 8, in reference to the rejection under 35 U.S.C. §103 of claims 1-20, Applicants argue "*neither Simmons nor Frazier, alone or in combination, discloses or even suggest assignment of a plurality of pointer values to a corresponding plurality of records in a pointer value buffer associated with each of the virtual links, the assignment of the plurality of pointer values based, at least in part, on the relative order in which data frames are transmitted on each of the virtual links and each of the plurality of pointer values being used to determine an order in which the data frames corresponding to the plurality of pointer values are promoted from a receive buffer for transmission.*"

In response Examiner respectfully disagrees and is content the Office Action has clearly pointed out the claimed limitations corresponding that taught by the prior art of Simmons in view of Frazier. Contradistinction to Applicants' allegation, Simmons in view Frazier does indeed teaches the claimed invention as currently claimed.

Examiner believes an earnest attempt has been made in addressing all of the Applicants' arguments. Due to the arguments are not persuasive, the rejection from the last Office Action is maintained.

Conclusion

6. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Muller et al (USP 6,192,028).

7. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Frank Duong whose telephone number is (703) 308-5428. The examiner can normally be reached on 7:00AM-3:30PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Seema Rao can be reached on (703) 308-5463. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 872-9314 for regular communications and (703) 872-9314 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 305-4700.

Frank Duong
July 14, 2003

Seema S. Rao Seema S. Rao
Supervisor Primary Examiner 7/24/03
Art Unit 2666

SEEMA S. RAO
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